SOP Title:	HVAC Preventive Maintenance		
Asset Description	Air Handling Unit		
Ref#:	REF-AHU/000	**Account / site**	IFM Services for
Rev#:	01	**Date:**	April 25, 2019
Photo of the Asset:			



Prepared by Name / Signature / Date	
Validated by Name / Signature / Date	
Reviewed/Approved by (Account Director) Name / Signature / Date	

1. HSE Precautions:

- ❖ It will be inserted by QHSE section based on the hazards / risks associated with each PPM

2. Key contact:

- ❖ Supervisor:
- ❖ First aider:

3. PPM SOP:

- ❖ Steps through which the PPM shall be carried out, it shall cover the different aspects of PPM based on the PPM frequency (e.g. monthly, quarterly, annual PPMs of the same asset).

Safety Precautions:

Remember it is safe to work on Isolated Electrical apparatus

Remember Always Over confidence can lead to accidents and even Fatality

1. Permit to work

2. Isolate power source

3. Lock off tag out

4. De-energize, Test and confirm, there is no power source available

5. Ensure Earthing is proper

6. Check for current leakage in conductors

7. Wear P.P.E to the rating and hearing protection (rated rubber gloves, flash proof clothing, flash proof helmet and face shield , rated rubber floor mats to be included for high voltage installations)

8. Use insulated tools to the rating

9. Do not wear any jewellery while working with electricity

10. Do not use wet access and access constructed of metal while working near high voltage electrical sources

11.Follow the pocket rule while working on energized systems

12. All power tools used should be of low voltage If possible, The tools should be double insulated with joint free cables , PAT tested and tagged

Remember always when entering any High Voltage area

1. keep minimum distance of 500 mm from live sources

2. High Voltage current has a tendency to jump to ground if there is a leak in the conductor

3. Never touch any metal parts or earth conductor with bare hands

4. Ensure that the system is de-energized and properly grounded before opening any covers.

5. Ensure that no bare parts of the body come in between 2 high voltage electrical fields in close proximity

6. Any electrical Arc can produce an heat of approximately 10,000 ^{0} F to 12,000 ^{0} F which is hotter than the surface of the sun

7. Work in pairs only

First Aid Measures

1. Call for help

2. Conduct scene survey and make sure you are safe before touching the victim

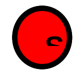
3. Make sure that there are no unsafe electrical power sources

4. Isolate the supply source if possible or try to release the victim with adequately insulated safe material if you are totally safe

5. Never attempt to give any First Aid unless you are trained. And the scene is totally safe

6. Never attempt to move the victim or administer first aid unless you are sure that the victim sustains no spinal injuries and the scene is totally safe

7. Check Air way , Breathing and Circulation and establish if possible Arrest bleeding make sure



STOP



CHECK FOR DANGER



EXPOSURE PROTECTION



NO OBVIOUS RISK



ESTABLISH PRIORITIES

1.		Check the AHU for any physical damage.
2.		Switch off the AHU units from the BMS /main panel and confirm the system stop automatically.
3.		Switch off the machine from control panel and follow the LOTO procedure prior to start the PPM.
4.		Open the access panels of AHU.
5.		Rotate manually the supply and exhaust fans for conforming free rotation.
6.		Check for sign of any water leakage in cooling coil.
7.		Clean the cooling coil with pressurized water at 3.5 Bar.

8.		Check and report for any signs of corrosion on the unit body.
9.		Clean AHU control panel with brush & blower, tighten and ensure all the electrical terminals & connections are intact.
10.		Check the continuity of all contactors by operating them manually.
11.		Clean the electrical terminal with brush and air blower of AHU motors.
12.		Check the belt condition and belt tension.
13.		Check and confirm the motors bases are firm tightened.
14.		Check the foundation base springs if any corrosion / damage.

15.		Check cleanliness of sand louvers.
16.		Clean the pre-filter with water pressure.
17.		Clean the Bag-filter or replace if necessary.
18.		Clean and check the duct sensors for any damages.
19.		Check the Differential Pressure Switch for any damages.
20.		Check condensate drain tray and pipe lines, clean the trays.
21.		Remove the LOTO and switch on the AHU.

22.		Check sign for air leakages, bypassing or short cycling of air flow.
23.		Check for any abnormal noise from the unit.
24.		Check and record the supply fan motor Ampere R_Y_B Phase.
25.		Check and record the return fan motor Ampere R_Y_B Phase.
26.		Check and record the heat wheel motor Ampere R_Y_B Phase.
27.		Check the actuators modulating valves are working, to ensure change the set point from the BMS / control panel.

28.		Check the healthiness of the valves, ensure the valves free operating to close and open.(lubricate the spindles if required)
29.		Check and ensure all automatic air vents are functioning normal.
30.		Set the supply temperature at 22°C.
31.		Check and record the chilled water inlet / outlet temperatures.
32.		Check and record the chilled water inlet and outlet pressures.
33.		Switch on the FAHU units from the BMS / control panel and confirm the system start automatically.

1.	Check and ensure the entire task is completed and unit is running in normal condition.
2.	A corrective Work order to be raised for any defects or malfunctions identified which couldn’t be rectified during PPM.